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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,702	08/30/2000	Brian A. Vaartstra	150.00800102	2471

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MUETING, RAASCH & GEBHARDT, P.A.  
P.O. BOX 581415  
MINNEAPOLIS, MN 55458

EXAMINER

BARRECA, NICOLE M

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 09/09/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/651,702

Applicant(s)

VAARTSTRA, BRIAN A.

Examiner

Nicole M. Barreca

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-25,27-29,31,32 and 43-54 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 19-25,27-29,31,32 and 43-54 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 17.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. Claims 19-25, 27-29, 31, 32, 43-54 are pending in this application.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 19, 22, 46, 49 and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Gallagher (US 5,389,263).
4. Gallagher discloses a supercritical composition for the removal of organic materials, such as RDX (cyclotrimethylenetetramine) and HMX (cyclotetramethylenetetranitriamine), from a liquid solution. Mixtures of crystalline organic materials such as RDX and HMX are separated using supercritical fluids as anti-solvents. The solid mixture containing at least two components to be separated are dissolved in a liquid solvent to form a solution and a supercritical anti-solvent is added to the solution in order to induce precipitation of one component (col.3, 39-65, col.7, 46-56). In one example the anti-solvent is sulfur trioxide (col.8, 56-57). The liquid solvent is any organic solvent or mixture of organic solvents (col.8, 58-60). See also col.9, 6-col.10, 39.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 20, 21, 23-25, 27-29, 31, 32, 43-45, 47, 48, 50, 51, 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gallagher.

7. Gallagher does not explicitly disclose that the organic removal composition further includes, in addition to the sulfur trioxide, an oxidizer, such as nitrous oxide and/or additional components such as carbon dioxide or nitrogen. Gallagher however does teach that a second anti-solvent, different from the first anti-solvent may also be used (col.10, 36-39) and that additional examples of anti-solvents include nitrous oxide, nitrogen and mixture thereof (col.8, 48-55). Carbon dioxide may also be used as the anti-solvent (col.8, 46-47). It would have been obvious to one of ordinary skill in the art to include an oxidizer, such as nitrous oxide and/or an additional component such as carbon dioxide or nitrogen to the supercritical organic removal composition comprising sulfur trioxide in the method of Gallagher because Gallagher teaches that a second anti-solvent, different from the first anti-solvent may also be used and that additional examples of anti-solvents include carbon dioxide, nitrous oxide, nitrogen and mixtures thereof. Gallagher is silent on the amounts of anti-solvents used and does not disclose that the ratio of the first component to the total of the second component plus sulfur trioxide is about 1:100 by volume to about 100:1 by volume, or that the ratio of the carbon dioxide to sulfur trioxide is about 10:1 by volume to about 1:1 volume. One of ordinary skill in the art would recognize that varying the amount of anti-solvent used in the composition would affect the rate at which the precipitation or removal occurs and in

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re Boesch (617 F.2d 272, 205 USPQ 215, CCPA 1980) establishes that it is unpatentable to discover optimum operating conditions or ranges of general conditions disclosed in the prior art. It is therefore within the ability of one of ordinary skill in the art to modify the teachings of Gallagher to obtain the claimed volume ratios, a modification, which has been deemed unpatentable by the previously cited case law.

### ***Response to Arguments***

8. Applicant's arguments filed 6/20/03 have been fully considered but they are not persuasive.

9. In response to applicant's argument that Gallagher fails to teach an organic removal composition, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

10. The applicant also argues that the composition of Gallagher includes liquid solvent and dissolved in addition to the supercritical fluid and therefore can not "consist essentially of supercritical sulfur trioxide." Gallagher teaches that the supercritical anti-solvent is added to the solution. Therefore, prior to this addition, Gallagher teaches a composition which comprises only the supercritical anti-solvent, meeting the limitations of the applicant's claim.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole M. Barreca whose telephone number is 703-308-7968. The examiner can normally be reached on Monday-Thursday (8:00 am-6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703-308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

nmb  
September 7, 2003

  
MARK F. HUFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700